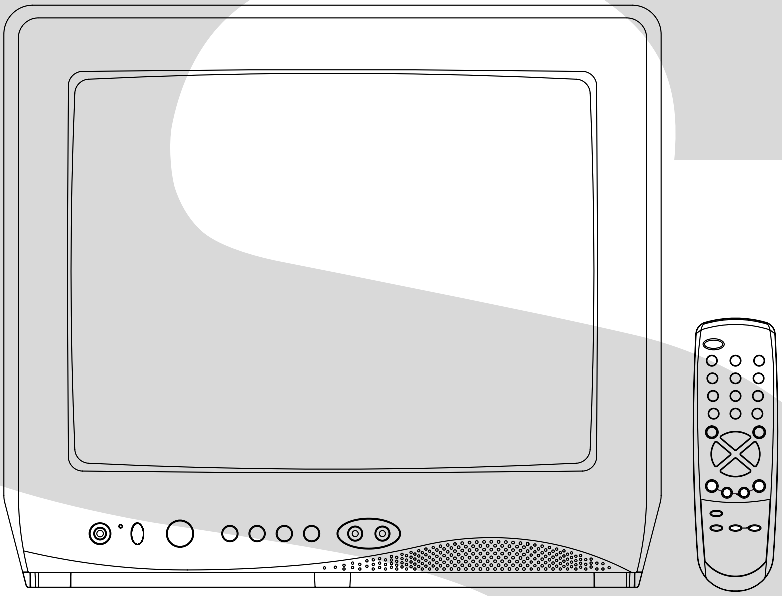
TOSHIBA

FILE NO. 050-200603GR
(MFR'S VERSION B)

SERVICE MANUAL

COLOR TELEVISION

13A26
13A26C



The above models are classified as a green products (*1), as indicated by the underlined serial number. This Service Manual describes replacement parts for the green product. When repairing these green product(s), use the part(s) described in this manual and lead-free solder (*2).

For (*1) and (*2), see the next page.

DOCUMENT CREATED IN JAPAN, January, 2006 GREEN

(*1) GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

(*2) LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING

This product is manufactured using lead free solder.

DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT !

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product — especially when soldering large components, through-hole pins, and on PCBs — as the level of heat required to melt lead-free solder is high.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Headphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

TABLE OF CONTENTS

GENERAL SPECIFICATIONS

G-1	**TV System**	CRT	CRT Size / Visual Size	13 inch / 335.4mmV
			CRT Type	Normal
			Deflection	90 degree
			Magnetic Field BV/BH	+0.45G/0.18G
		Color System		NTSC
		Speaker		1Speaker
			Position	Bottom
			Size	3 Inch
			Impedance	8 ohm
		Sound Output	MAX	1.0 W
			10%(Typical)	--- W
		NTSC3.58+4.43 /PAL60Hz		No
G-2	**Tuning System**	Broadcasting System		US System M
		Tuner and Receive CH	System	1Tuner
			Destination	USA(W/ CATV)
			Tuning System	F-Synth
			Input Impedance	VHF/UHF 75 ohm
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate Frequency	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
		Preset CH		No
		Stereo/Dual TV Sound		No
		Tuner Sound Muting		Yes
G-3	**Power**	Power Source	AC	120V AC 60Hz
			DC	
		Power Consumption	at AC	54 W at AC 120 V 60 Hz
			Stand by (at AC)	3 W at AC 120 V 60 Hz
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
G-4	**Regulation**		Safety	UL
			Radiation	FCC
			X-Radiation	DHHS
G-5	**Temperature**		Operation	+5oC ~ +40oC
			Storage	-20oC ~ +60oC
G-6	**Operating Humidity**			Less than 80% RH

GENERAL SPECIFICATIONS

G-7	**On Screen Display**	Menu			Yes
			Menu Type		Character
			Picture		Yes
				Contrast	Yes
				Brightness	Yes
				Color	Yes
				Tint	Yes
				Sharpness	Yes
			Audio		No
				Bass	No
				Treble	No
				Balance	No
				BBE On/Off	No
				Stable Sound On/Off	No
			CH Set Up		Yes
				TV/CABLE(CATV)	Yes
				Auto CH Memory	Yes
				Add/ Delete	Yes
			Language		Yes
			V-chip		Yes
			Lock		Yes
			On Timer		Yes
				CH Label	No
				Favorite CH	No
				Color Stream DVD/DTV	No
			Control Level		Yes
				Volume	Yes
				Brightness	Yes
				Contrast	Yes
				Color	Yes
				Tint	Yes
				Sharpness	Yes
				Tuning	No
				Bass	No
				Treble	No
				Balance	No
				Back Light	No
			Stereo,Audio Output,SAP		No
			Video		Yes
			Color Stream		No
			Channel(TV/Cable)		Yes
			CH Label		No
			Game Timer		Yes
			Sleep Timer		Yes
			Sound Mute		Yes
			V-chip Rating		Yes
G-8	**OSD Language**				English French Spanish
G-9	**Clock and Timer**	Sleep Timer		Max Time	120 Min
				Step	10 Min
		On Timer		Program(On Timer)	Yes
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode)		more than	-- Min Sec

GENERAL SPECIFICATIONS

G-10	**Remote Control**	Unit		RC-EH
		Glow in Dark Remocon		Yes
		Format		Toshiba
		Custom Code		40-BF h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		27 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100	No
			CH Up	Yes
			CH Down	Yes
			Volume Up	Yes
			Volume Down	Yes
			TV/Caption/Text	Yes
			CH1/CH2	Yes
			TV/Video(TV/AV)	Yes
			CH RTN/CH ENT(Quick View)	Yes
			Sleep	Yes
			RE Call(Call)	Yes
			Reset	Yes
			Menu	Yes
			Enter	Yes
			Mute	Yes
			Exit	No
			MTS(Audio Select)	No
			Set +	Yes
			Set -	Yes
		Multi Brand Keys	CH Up(VCR)	No
			CH Down(VCR)	No
			Pause/Still	No
			TV/VCR(VCR)	No
			Code	No
			FF	No
			Rew	No
			Rec	No
			Play	No
			Stop	No
			TV	No
			VCR	No
			Cable	No

GENERAL SPECIFICATIONS

G-11	**Features**	Auto Degauss		Yes
		Auto Shut Off		Yes
		Canal+		No
		CATV		Yes
		Anti-theft		No
		Rental		No
		Memory(Last CH)		Yes
		Memory(Last Volume)		Yes
		V-Chip		Yes
			Type	USA,ORION Type
		BBE		No
		Auto Search		No
		CH Allocation		No
		SAP		No
		Channel Lock		No
		Just Clock Function		No
		Game Position		No
		CH Label		No
		VM Circuit		No
		Full OSD		No
		Premiere		No
		Comb Filter		No
				___ Lines
		Auto CH Memory		Yes
		Hotel Lock		No
		Closed Caption		Yes
		FBT Leak Test Protect		Yes
		CH Lock		Yes
		Video Lock		Yes
		Game Timer (Max Time:120 Min)		Yes
		Stable Sound		No
		Energy Star		No
		Power On Memory		Yes
		Favorite CH		No
G-12	**Accessories**	Owner's Manual	Language	English/Spanish
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	
			Terminal	
		Loop Antenna		No
			Terminal	-
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		AC Plug Adapter		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Cord		No
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		ESP Card		No
		300 ohm to 75 ohm Antenna Adapter		No

GENERAL SPECIFICATIONS

G-13	**Interface**	Switch	Front	Power	Yes
				System Select	No
				Main Power SW	No
				Sub Power	No
				Channel Up/Reset	Yes
				Channel Down/Enter	Yes
				Volume Up/Set Up	Yes
				Volume Down/Set Down	Yes
				MENU=Volume Up+Volume Down	Yes
			Rear	AC/DC	No
				TV/CATV Selector	No
				Degauss	No
				Main Power SW	No
		Indicator		Power	Yes
				Stand-by	No
				On Timer	No
		Terminals	Front	Video Input	RCA
				Audio Input	RCA x 1
				Other Terminal	Ear Phone
			Rear	Video Input(Rear1)	No
				Video Input(Rear2)	No
				Audio Input(Rear1)	No
				Audio Input(Rear2)	No
				Video Output	No
				Audio Output	No
				Euro Scart	No
				Color Stream	No
				Diversity	No
				Ext Speaker	No
				DC Jack 12V(Center +)	No
				VHF/UHF Antenna Input	F Type
				AC Outlet	No
G-14	**Set Size**			Approx. W x D x H (mm)	362 x 360 x 320.5
G-15	**Weight**			Net (Approx.)	9.5 kg (20.9 lbs)
				Gross (Approx.)	11.0kg (24.4lbs)
G-16	**Carton**		Master Carton		No
				Content	---- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
			Gift Box	Material	Double/Brown
				Dimensions W x D x H(mm)	440 x 408 x 380
				Description of Origin	Yes
			Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	62
			Container Stuffing		866 Sets/40' container
G-17	**Cabinet Material**		Cabinet	Cabinet Front	PS 94V0 DECABROM
				Cabinet Rear	PS 94V0 DECABROM
			PCB	Non-Halogen Demand	No
				Eyelet Demand	Yes
G-18	**Environment**		Environmental standard requirement		Green procurement of TOSHIBA
			Pb-free		Phase3(Ph

GENERAL SPECIFICATIONS

G-1	**TV System**	CRT	CRT Size / Visual Size	13 inch / 335.4mmV
			CRT Type	Normal
			Deflection	90 degree
			Magnetic Field BV/BH	+0.45G/0.18G
		Color System		NTSC
		Speaker		1Speaker
			Position	Bottom
			Size	3 Inch
			Impedance	8 ohm
		Sound Output	MAX	1.0 W
			10%(Typical)	--- W
		NTSC3.58+4.43 /PAL60Hz		No
G-2	**Tuning System**	Broadcasting System		US System M
		Tuner and Receive CH	System	1Tuner
			Destination	USA(W/ CATV)
			Tuning System	F-Synth
			Input Impedance	VHF/UHF 75 ohm
			CH Coverage	2 - 69, 4A, A-5 - A-1, A - I, J - W, W+1 - W+84
		Intermediate Frequency	Picture(FP)	45.75MHz
			Sound(FS)	41.25MHz
			FP-FS	4.50MHz
		Preset CH		No
		Stereo/Dual TV Sound		No
		Tuner Sound Muting		Yes
G-3	**Power**	Power Source	AC	120V AC 60Hz
			DC	
		Power Consumption	at AC	54 W at AC 120 V 60 Hz
			Stand by (at AC)	3 W at AC 120 V 60 Hz
			Per Year	-- kWh/Year
		Protector	Power Fuse	Yes
G-4	**Regulation**		Safety	CSA
			Radiation	IC
			X-Radiation	HWC
G-5	**Temperature**		Operation	+5oC ~ +40oC
			Storage	-20oC ~ +60oC
G-6	**Operating Humidity**			Less than 80% RH

GENERAL SPECIFICATIONS

G-7	**On Screen Display**	Menu			Yes
			Menu Type		Character
			Picture		Yes
				Contrast	Yes
				Brightness	Yes
				Color	Yes
				Tint	Yes
				Sharpness	Yes
			Audio		No
				Bass	No
				Treble	No
				Balance	No
				BBE On/Off	No
				Stable Sound On/Off	No
			CH Set Up		Yes
				TV/CABLE(CATV)	Yes
				Auto CH Memory	Yes
				Add/ Delete	Yes
			Language		Yes
			V-chip		No
			Lock		Yes
			On Timer		Yes
				CH Label	No
				Favorite CH	No
				Color Stream DVD/DTV	No
			Control Level		Yes
				Volume	Yes
				Brightness	Yes
				Contrast	Yes
				Color	Yes
				Tint	Yes
				Sharpness	Yes
				Tuning	No
				Bass	No
				Treble	No
				Balance	No
				Back Light	No
			Stereo,Audio Output,SAP		No
			Video		Yes
			Color Stream		No
			Channel(TV/Cable)		Yes
			CH Label		No
			Game Timer		Yes
			Sleep Timer		Yes
			Sound Mute		Yes
			V-chip Rating		No
G-8	**OSD Language**				English French Spanish
G-9	**Clock and Timer**	Sleep Timer		Max Time	120 Min
				Step	10 Min
		On Timer		Program(On Timer)	Yes
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode)		more than	-- Min Sec

GENERAL SPECIFICATIONS

G-10	**Remote Control**	Unit		RC-EH
		Glow in Dark Remocon		Yes
		Format		Toshiba
		Custom Code		40-BF h
		Power Source	Voltage(D.C) UM size x pcs	3V UM-4 x 2 pcs
		Total Keys		27 Keys
		Keys	Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			100	No
			CH Up	Yes
			CH Down	Yes
			Volume Up	Yes
			Volume Down	Yes
			TV/Caption/Text	Yes
			CH1/CH2	Yes
			TV/Video(TV/AV)	Yes
			CH RTN/CH ENT(Quick View)	Yes
			Sleep	Yes
			RE Call(Call)	Yes
			Reset	Yes
			Menu	Yes
			Enter	Yes
			Mute	Yes
			Exit	No
			MTS(Audio Select)	No
			Set +	Yes
			Set -	Yes
		Multi Brand Keys	CH Up(VCR)	No
			CH Down(VCR)	No
			Pause/Still	No
			TV/VCR(VCR)	No
			Code	No
			FF	No
			Rew	No
			Rec	No
			Play	No
			Stop	No
			TV	No
			VCR	No
			Cable	No

GENERAL SPECIFICATIONS

G-11	Features	Auto Degauss		Yes
		Auto Shut Off		Yes
		Canal+		No
		CATV		Yes
		Anti-theft		No
		Rental		No
		Memory(Last CH)		Yes
		Memory(Last Volume)		Yes
		V-Chip		No
			Type	
		BBE		No
		Auto Search		No
		CH Allocation		No
		SAP		No
		Channel Lock		No
		Just Clock Function		No
		Game Position		No
		CH Label		No
		VM Circuit		No
		Full OSD		No
		Premiere		No
		Comb Filter		No
				___ Lines
		Auto CH Memory		Yes
		Hotel Lock		No
		Closed Caption		Yes
		FBT Leak Test Protect		Yes
		CH Lock		Yes
		Video Lock		Yes
		Game Timer (Max Time:120 Min)		Yes
		Stable Sound		No
		Energy Star		No
		Power On Memory		Yes
		Favorite CH		No
G-12	Accessories	Owner's Manual	Language	English/French
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	
			Terminal	
		Loop Antenna		No
			Terminal	-
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		AC Plug Adapter		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Cord		No
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		No
		ESP Card		No
		300 ohm to 75 ohm Antenna Adapter		No

GENERAL SPECIFICATIONS

G-13	**Interface**	Switch	Front	Power	Yes
				System Select	No
				Main Power SW	No
				Sub Power	No
				Channel Up/Reset	Yes
				Channel Down/Enter	Yes
				Volume Up/Set Up	Yes
				Volume Down/Set Down	Yes
				MENU=Volume Up+Volume Down	Yes
			Rear	AC/DC	No
				TV/CATV Selector	No
				Degauss	No
				Main Power SW	No
		Indicator		Power	Yes
				Stand-by	No
				On Timer	No
		Terminals	Front	Video Input	RCA
				Audio Input	RCA x 1
				Other Terminal	Ear Phone
			Rear	Video Input(Rear1)	No
				Video Input(Rear2)	No
				Audio Input(Rear1)	No
				Audio Input(Rear2)	No
				Video Output	No
				Audio Output	No
				Euro Scart	No
				Color Stream	No
				Diversity	No
				Ext Speaker	No
				DC Jack 12V(Center +)	No
				VHF/UHF Antenna Input	F Type
				AC Outlet	No
G-14	**Set Size**			Approx. W x D x H (mm)	362 x 360 x 320.5
G-15	**Weight**			Net (Approx.)	9.5 kg (20.9 lbs)
				Gross (Approx.)	11.0kg (24.4lbs)
G-16	**Carton**		Master Carton		No
				Content	---- Sets
				Material	-- /--
				Dimensions W x D x H(mm)	-- x -- x --
				Description of Origin	No
			Gift Box	Material	Double/Brown
				Dimensions W x D x H(mm)	440 x 408 x 380
				Description of Origin	Yes
			Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	62
			Container Stuffing		866 Sets/40' container
G-17	**Cabinet Material**		Cabinet	Cabinet Front	PS 94V0 DECABROM
				Cabinet Rear	PS 94V0 DECABROM
			PCB	Non-Halogen Demand	No
				Eyelet Demand	Yes
G-18	**Environment**		Environmental standard requirement		Green procurement of TOSHIBA
			Pb-free		Phase3(Ph

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

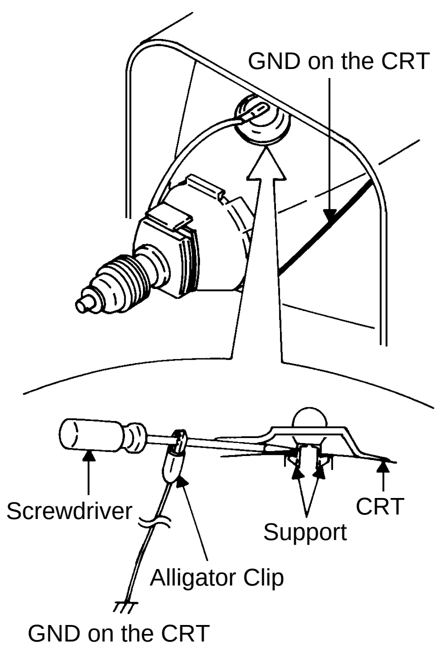


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support.
   (Refer to Fig. 1-2.)

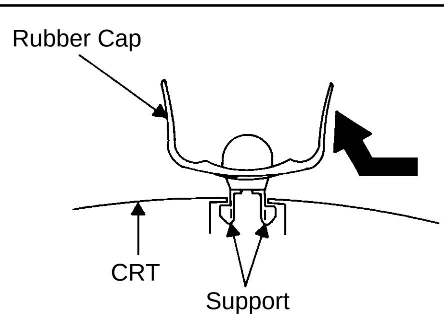


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

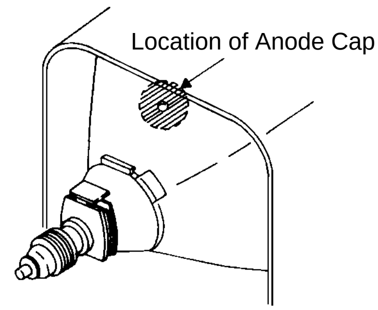


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**

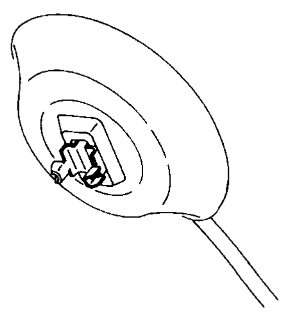


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5**.

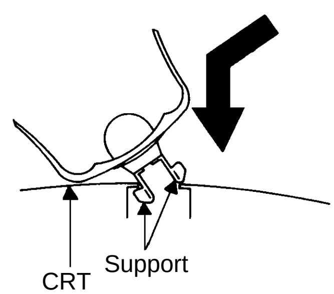


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage.
(Refer to Fig. 2-1.)

NOTE

Masking is carried out on all the parts located within 10 mm distance from IC leads.

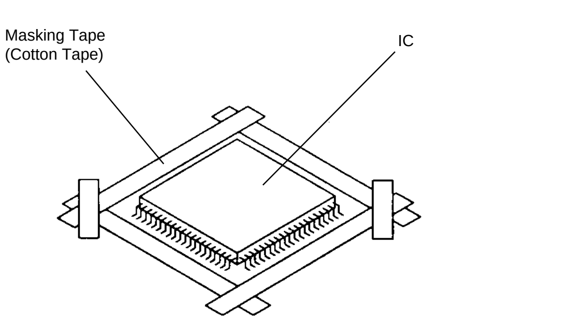


Fig. 2-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

NOTE

Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

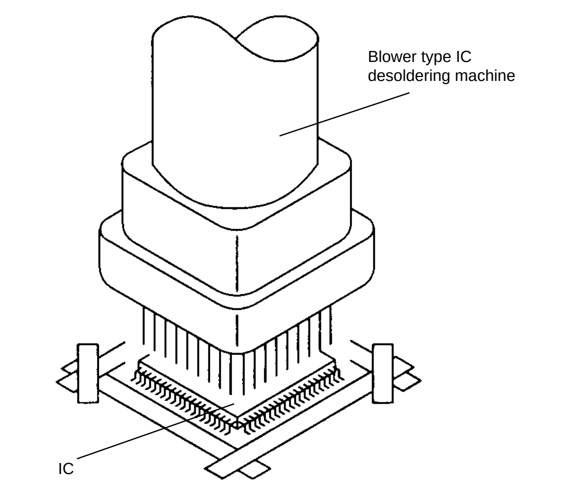


Fig. 2-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

NOTE

Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

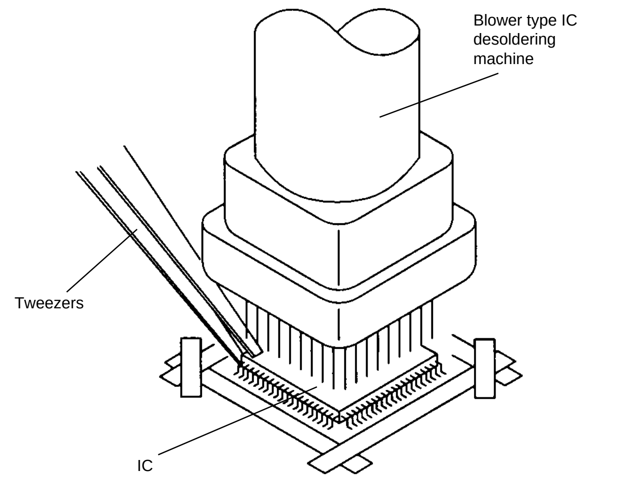


Fig. 2-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

NOTE

Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

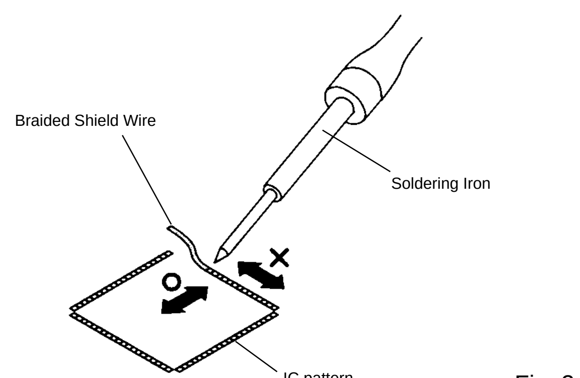


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

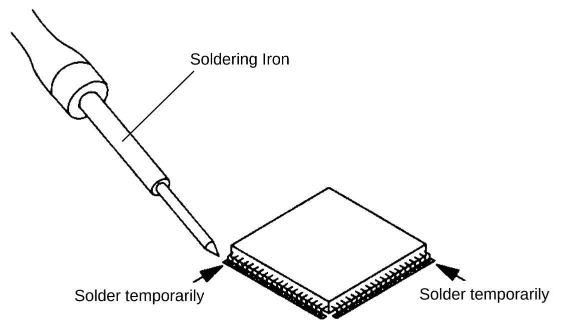


Fig. 2-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

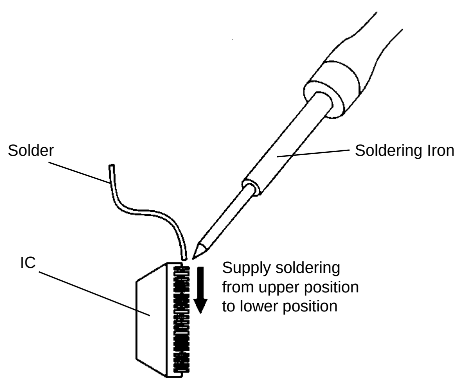


Fig. 2-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

NOTE

Do not absorb the solder to excess.

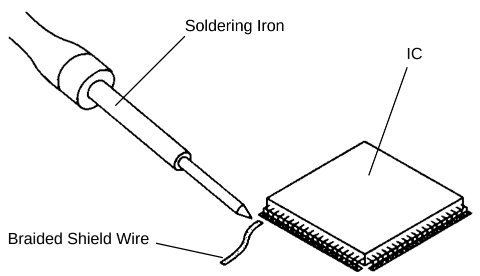


Fig. 2-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**

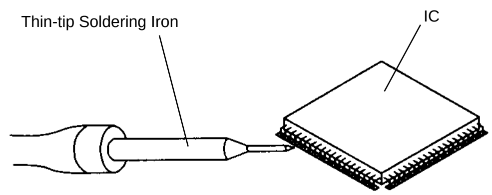


Fig. 2-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	1	Initialization of factory data. NOTE: Do not use this for normal servicing. If you set factory initialization, the memories are reset such as the channel setting, the POWER ON total hours.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set factory initialization, the total hours is reset to "0".

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds.
3. After the confirmation of using hours, turn off the power.

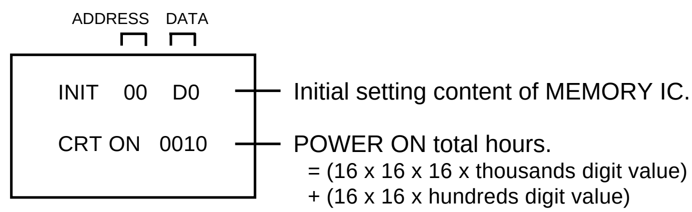


FIG. 1

= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	D0	04	EB	4E	47	B3	24	69	*1	00	00	05	90	D4	00	07

*1

INI	USA	CANADA
08	39	38

Table 1

1. Enter DATA SET mode by setting VOLUME to minimum.
2. While holding down VOLUME button on front cabinet, press key **(6)** on remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 1.
3. ADDRESS is now selected and should "blink". Using the VOL. +/- button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press ENTER to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using VOL. +/- button until required DATA value has been selected.
6. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.
   After the data input, set to the initializing of shipping.
9. Turn POWER on.
10. While holding down VOLUME button on front cabinet, press key **(1)** on remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease (YG6260M) on the contract section of the heat sink, Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Synchro Scope
2. Digital Voltmeter

On-Screen Display Adjustment

1. In the condition of NO indication on the screen. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

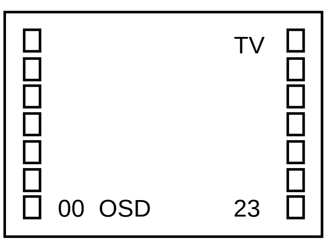


Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
3. Press the MENU button on the remote control to end the adjustments.

NO.	FUNCTION	NO.	FUNCTION
00	OSD H	16	CONTRAST CENT
01	CUT OFF	17	CONTRAST MAX
04	H.VCO	18	CONTRAST MIN
05	H.PHASE	19	COLOR CENT
06	V.SIZE	20	COLOR MAX
07	V.SHIFT	21	COLOR MIN
08	R.DRIVE	22	TINT
09	B.DRIVE	23	SHARPNESS
10	R.BIAS	24	FM LEVEL
11	G.BIAS	25	LEVEL
12	B.BIAS	26	SEPARATION 1
13	BRIGHT CENT	27	SEPARATION 2
14	BRIGHT MAX	28	TEST MONO
15	BRIGHT MIN	29	TEST STEREO

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CUT OFF

1. Adjust the unit to the following settings.
   R.DRIVE=10, B.DRIVE=10, R.BIAS=64, G.BIAS=64, B.BIAS=64, BRI.CENT=120, CONT.MAX=40.
2. Place the set with Aging Test for more than 15 minutes.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "CUT OFF".
4. Adjust the **Screen Volume** until a dim raster is obtained.

2-2: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the Focus Volume until picture is distinct.

2-3: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the white 100% signal from the Pattern Generator.
3. Using the adjustment control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(10)** on the remote control to select "R.BIAS".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R.BIAS.
6. Press the CH. UP/DOWN button on the remote control to select the "R.DRIVE", "B.DRIVE", "G.BIAS" or "B.BIAS".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R.DRIVE, B.DRIVE, G.BIAS or B.BIAS.
8. Perform the above adjustments 6 and 7 until the white color is looked like a white.

2-4: SUB TINT/SUB COLOR

1. Receive the color bar pattern. (RF Input)
2. Connect the oscilloscope to **TP023**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line.
   (Refer to Fig. 2-1)
5. Connect the oscilloscope to **TP022**.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(19)** on the remote control to select "COL.CENT".
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 110 ±10% of the white level. **(Refer to Fig. 2-2)**
8. Receive the color bar pattern. (Audio Video Input)
9. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~7.

ELECTRICAL ADJUSTMENTS

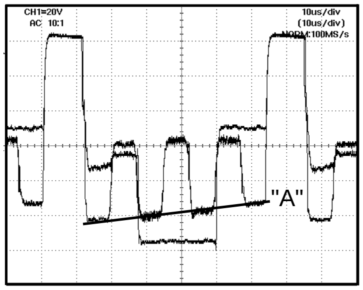


Fig. 2-1

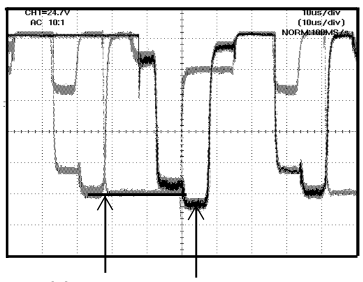


Fig. 2-2

2-5: HORIZONTAL PHASE

1. Receive the monoscope pattern.
2. Using the adjustment control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select "H.PHAS".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

2-6: VERTICAL SIZE

1. Receive the monoscope Pattern.
2. Using the adjustment control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select "V.SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 10 ± 2%.

2-7: VERTICAL SHIFT

1. Receive the monoscope Pattern.
2. Using the adjustment control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(07)** on the remote control to select "V.SFT".
4. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask. **(Refer to Fig. 2-3)**

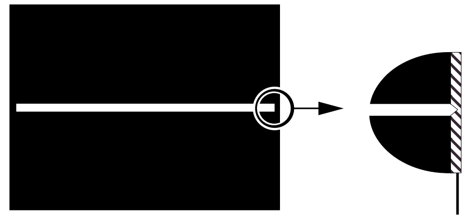


Fig. 2-3

2-8: OSD HORIZONTAL

1. Activate the adjustment mode display of **Fig. 1-1**.
2. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum. **(Refer to Fig. 2-4)**

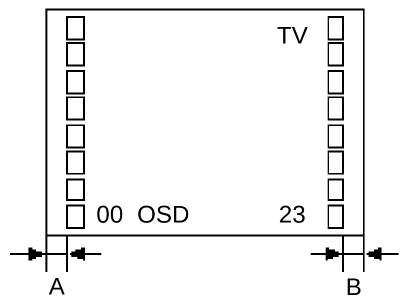


Fig. 2-4

2-9: BRIGHT MANUAL

1. Receive the monoscope pattern.(RF Input)
2. Using the adjustment control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(13)** on the remote control to select "BRI.CENT".
4. Press the VOL.UP/DOWN button on the remote control until the screen begin to shine.
5. Press the TV/VIDEO button on the remote to set to the AV mode. Then perform the above adjustment 2~4.

.

2-10: SUB CONTRAST

1. Receive an 70dB the color bar pattern.
2. Activate the adjustment mode display of **Fig. 1-1** press the channel button **(17)** on the remote control to select "CONT.MAX".
3. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "43".
4. Press the TV/VIDEO button on the remote control to set to the AV mode.
5. Activate the adiustment mode display of **Fig 1-1** paess the channel button **(17)** on the remote control to select"CONT.MAX".
6. Press the VOL.UP/DOWN button on the remote control unitil the contrast step No. becomes "52".
7. Receive a broadcast and check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-11: Confirmation of Fixed Value (step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below. (RF/AV)

NO.	FUNCTION	STEP NO.	NO.	FUNCTION	STEP NO.
04	H VCO	04	21	COLOR MIN	00
14	BRIGHT MAX	140	23	SHARPNESS	53
15	BRIGHT MIN	50	24	FM LEVEL	00
16	CONT CENT	25	25	LEVEL	00
18	CONT MIN	12	26	SEPARATION 1	00
20	COLOR MAX	74	27	SEPARATION 2	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

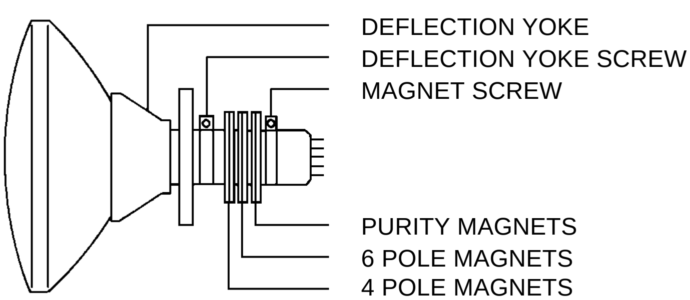


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

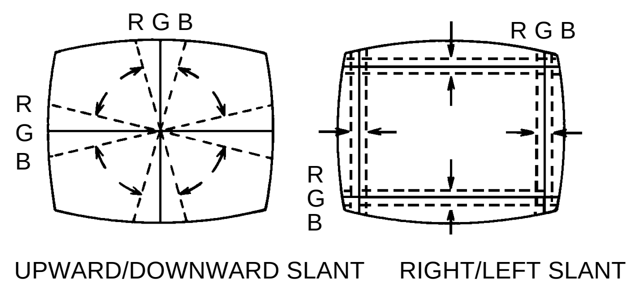
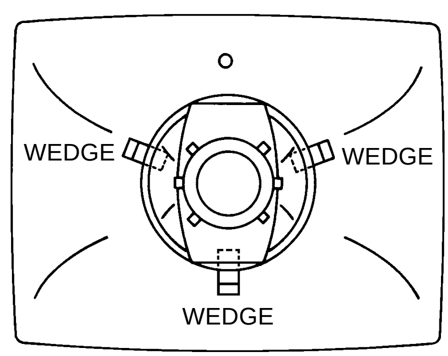


Fig. 3-2-a

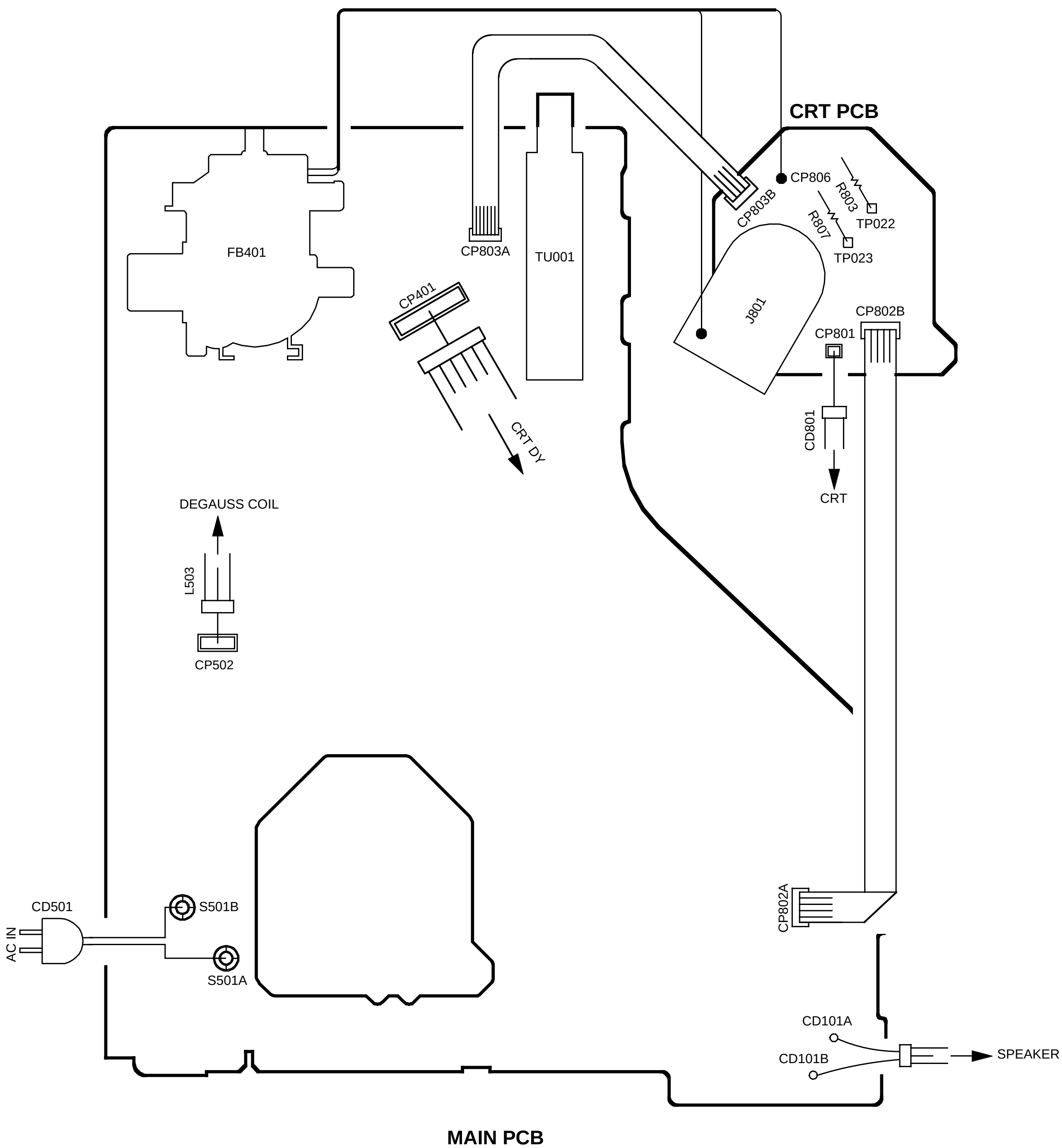


WEDGE POSITION

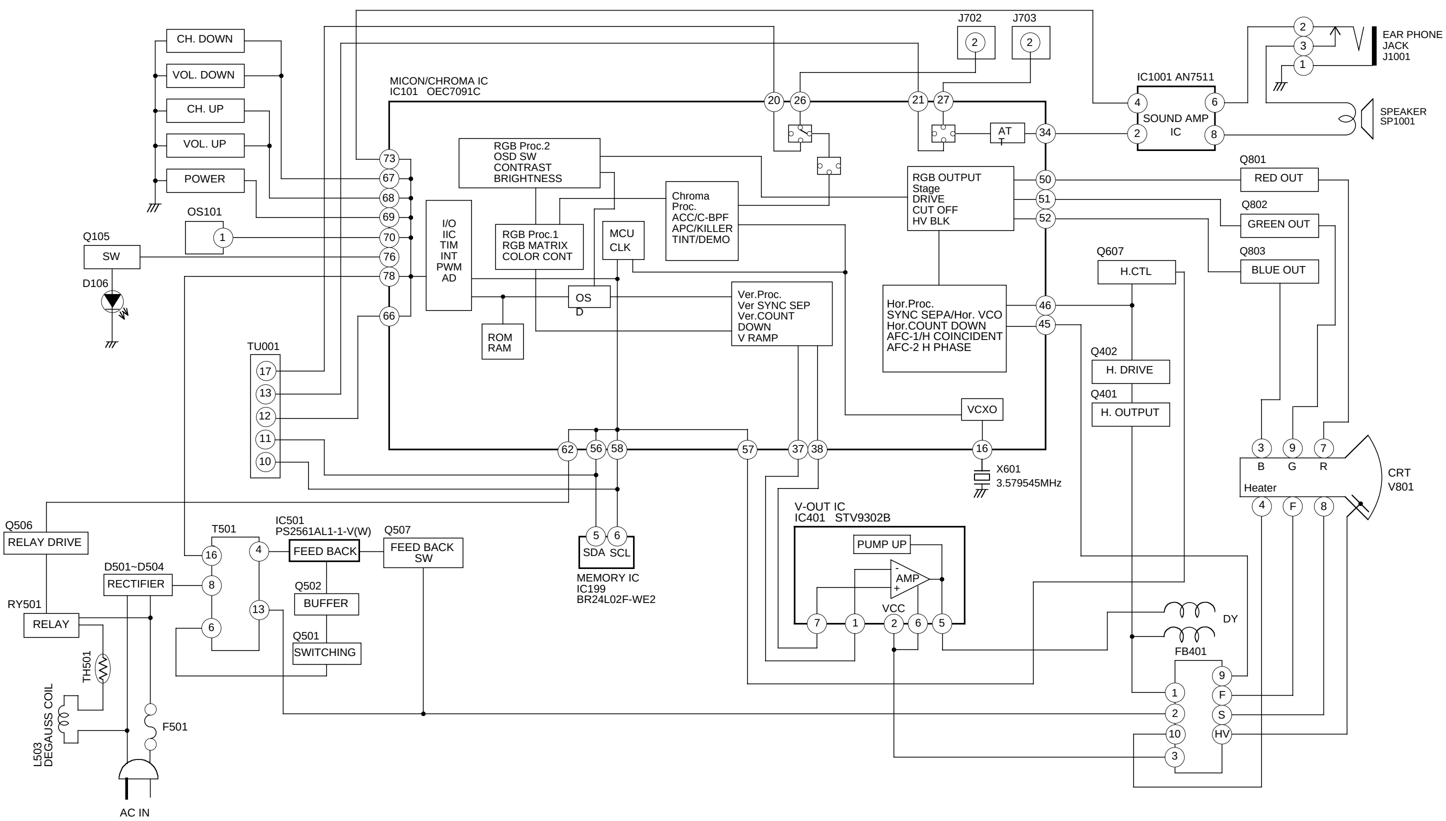
Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

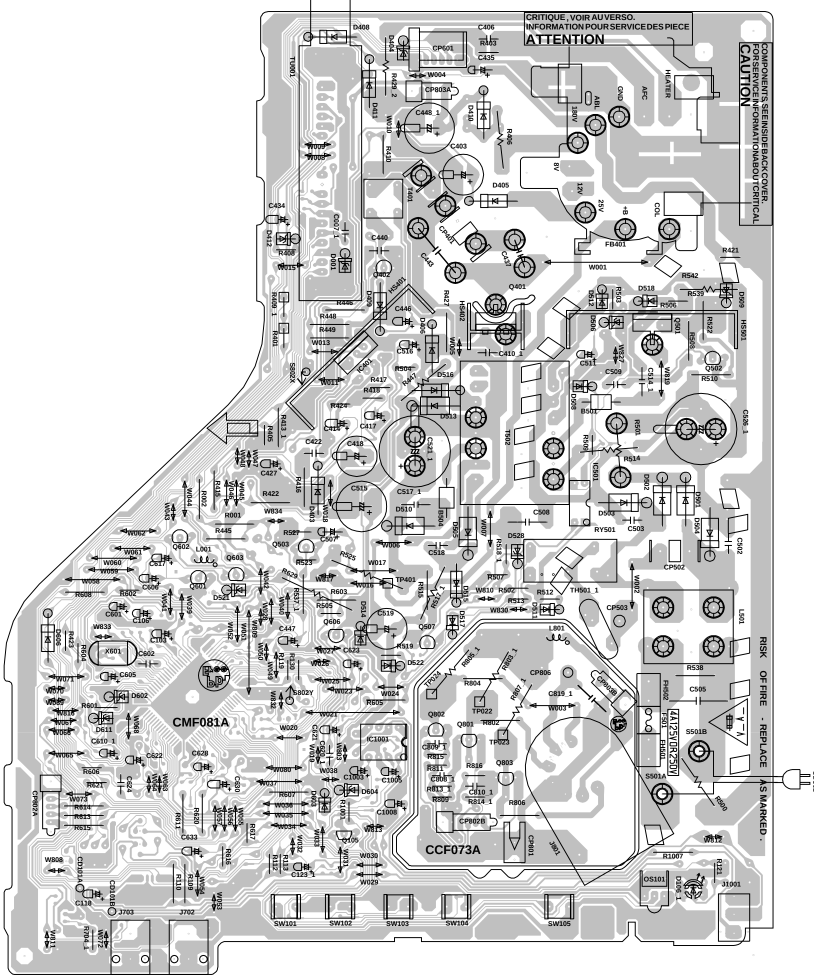
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



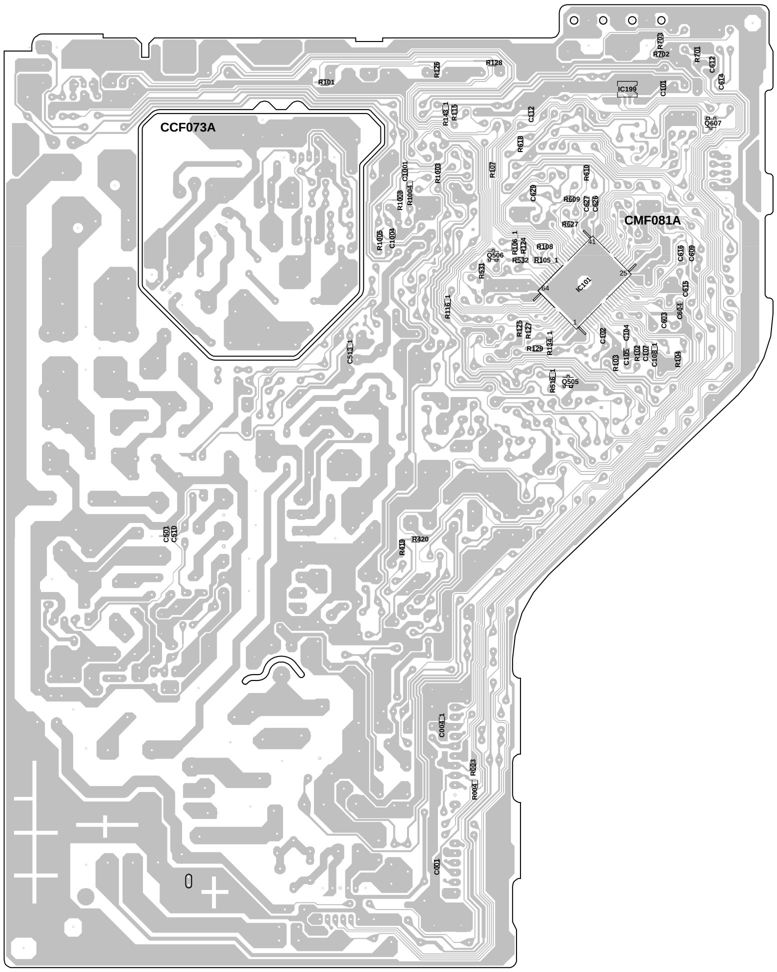
BLOCK DIAGRAM



PRINTED CIRCUIT BOARDS
MAIN/CRT (INSERTED PARTS)
SOLDER SIDE

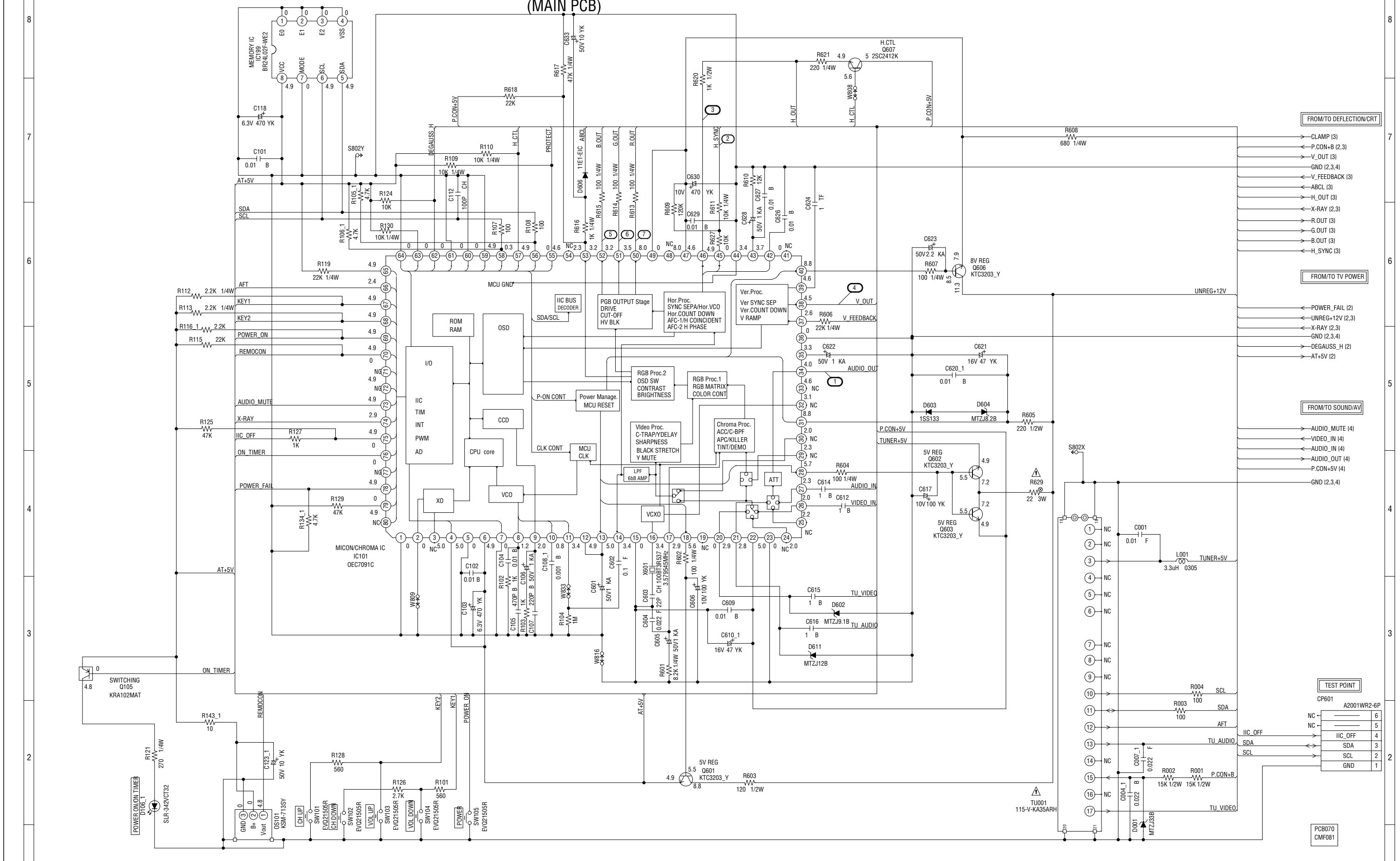


PRINTED CIRCUIT BOARDS
MAIN (CHIP MOUNTED PARTS)
SOLDER SIDE



MICON/CHROMA/TUNER SCHEMATIC DIAGRAM

(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

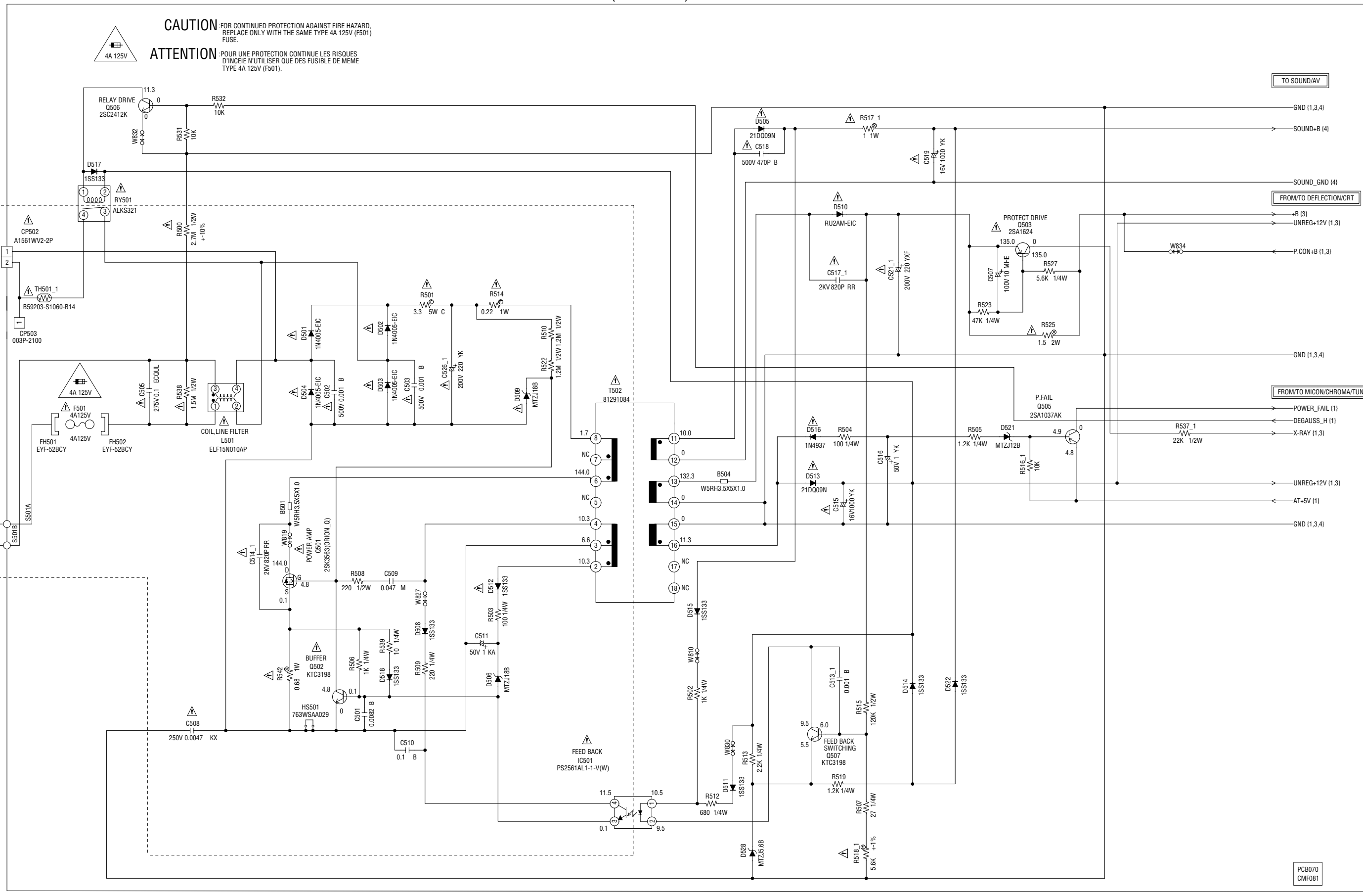
CAUTION: DIGITAL TRANSISTOR

TV POWER SCHEMATIC DIAGRAM

(MAIN PCB)

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 4A 125V (F501) FUSE.

ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 4A 125V (F501).



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

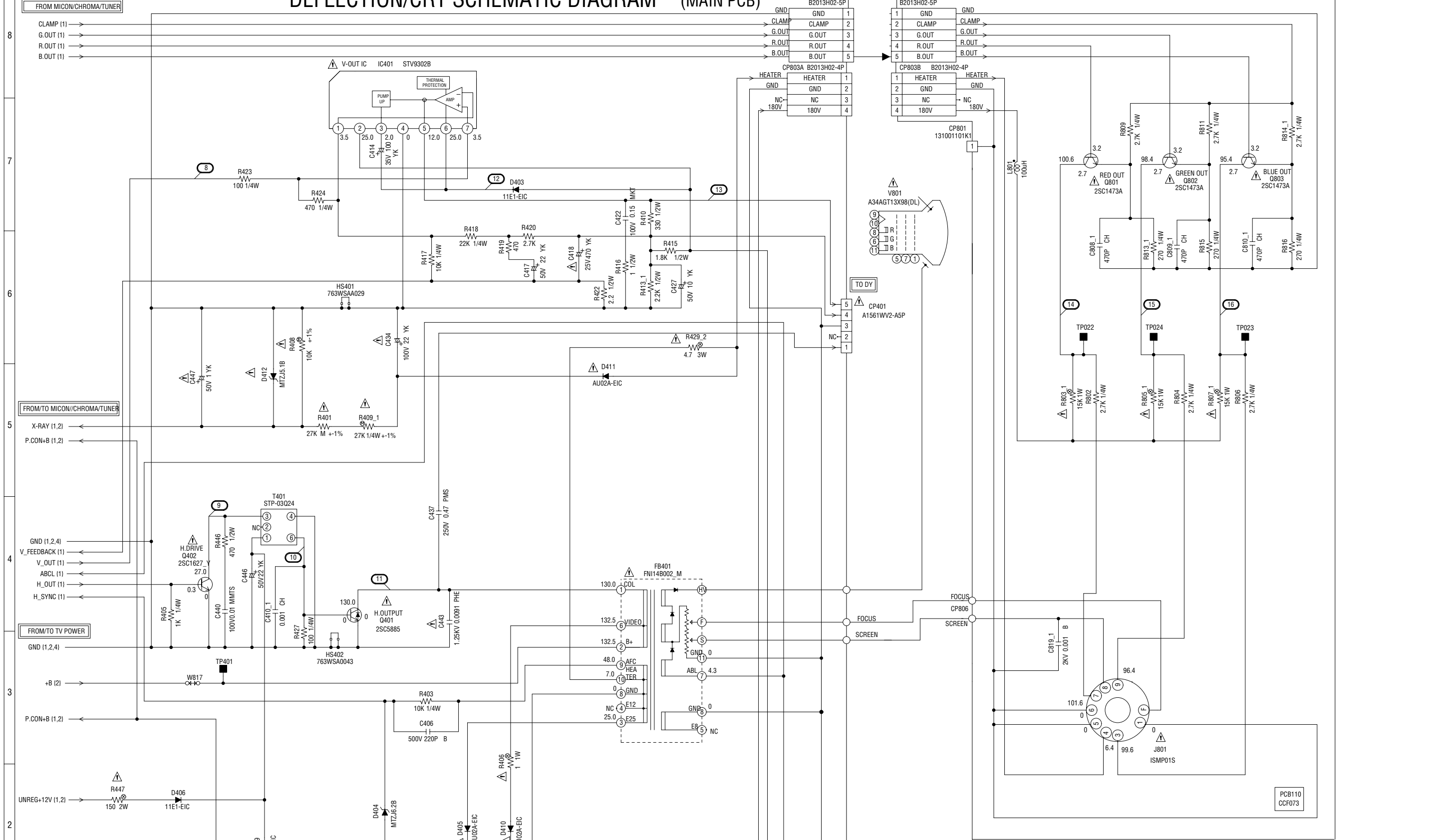
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

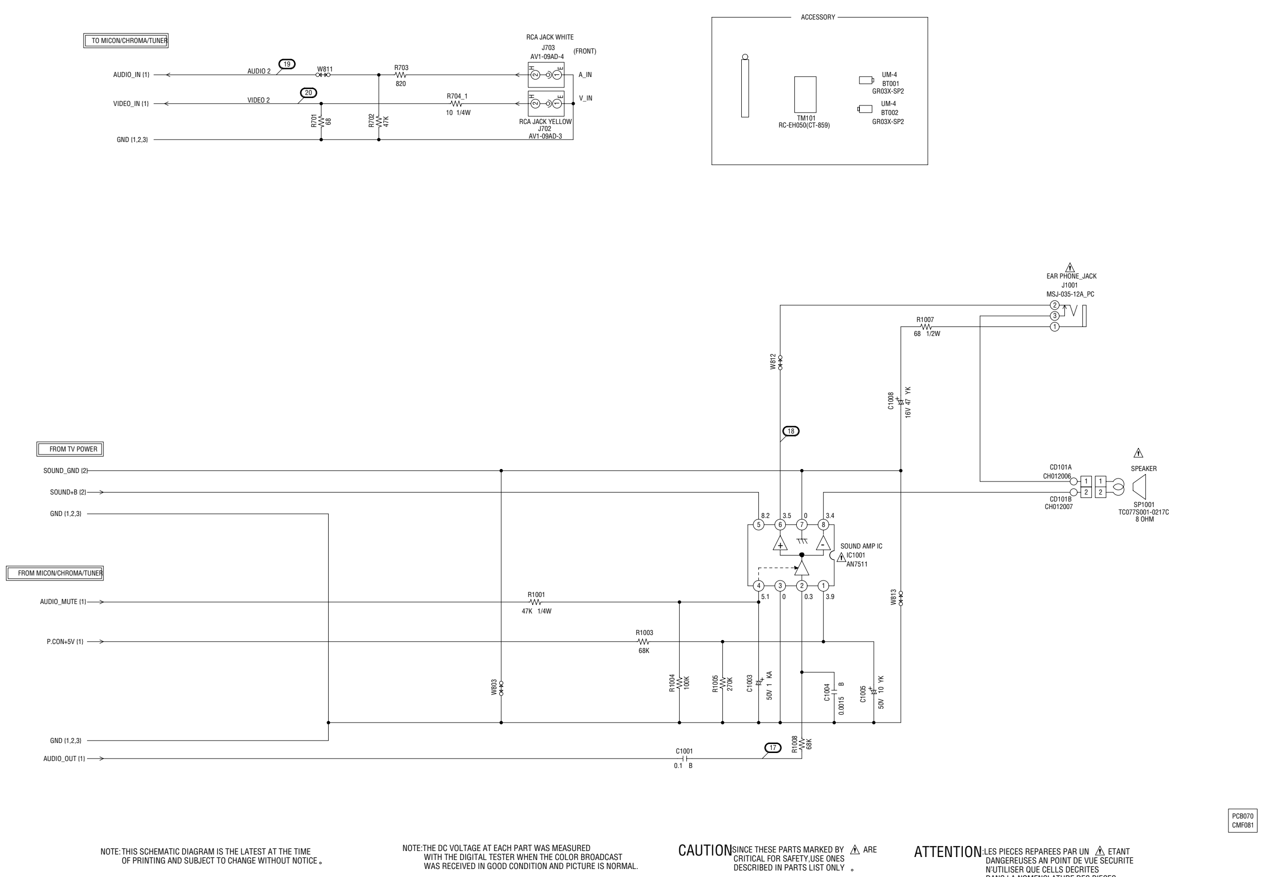
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

SOUND/AV SCHEMATIC DIAGRAM
(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

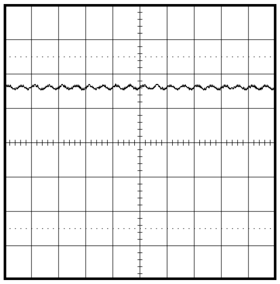
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

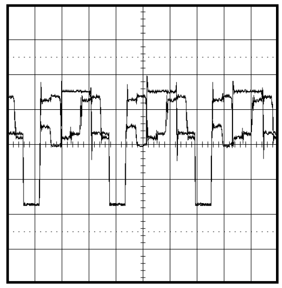
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

WAVEFORMS

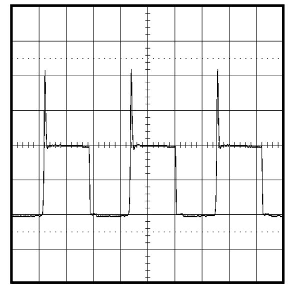
MICON/CHROMA/TUNER



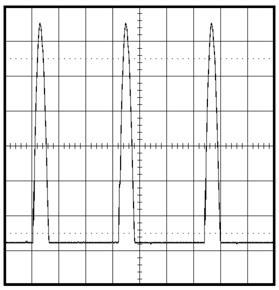
(1) 0.5V 2ms/div



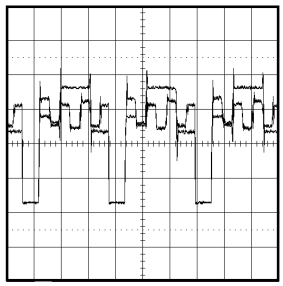
(5) 1V 20µs/div



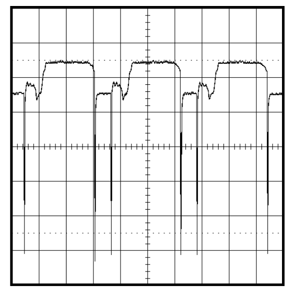
(9) 20V 20µs/div



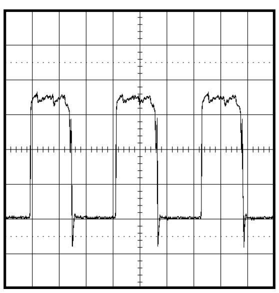
(2) 20V 20µs/div



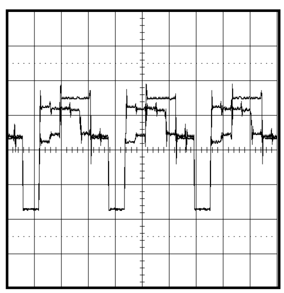
(6) 1V 20µs/div



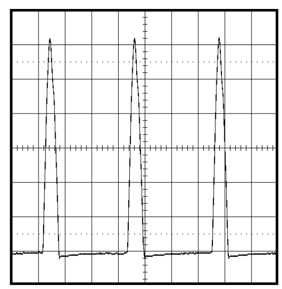
(10) 2V 20µs/div



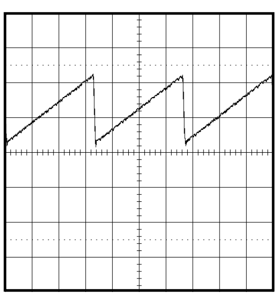
(3) 200mV 20µs/div



(7) 1V 20µs/div

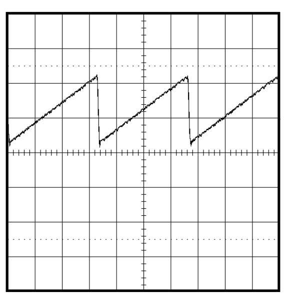


(11) 200V 20µs/div

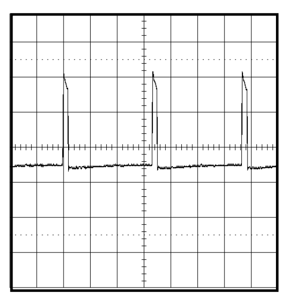


(4) 0.5V 5ms/div

DEFLECTION/CRT



(8) 0.5V 5ms/div

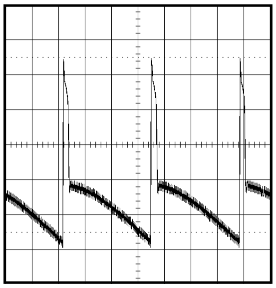


(12) 10V 5ms/div

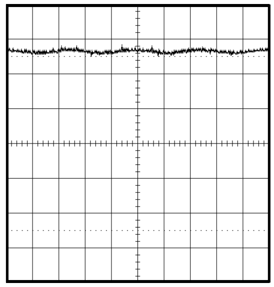
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

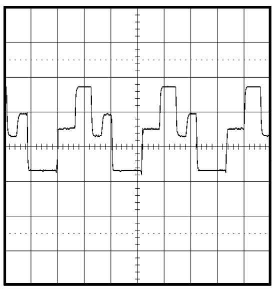
SOUND/AV



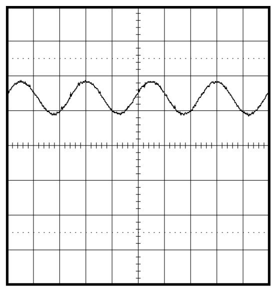
(13) 10V 5ms/div



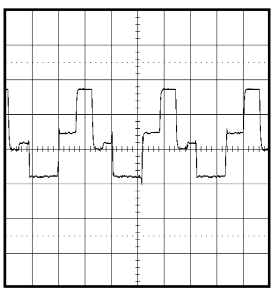
(17) 0.5V 1ms/div



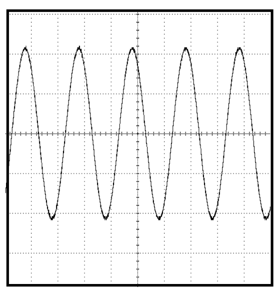
(14) 50V 20µs/div



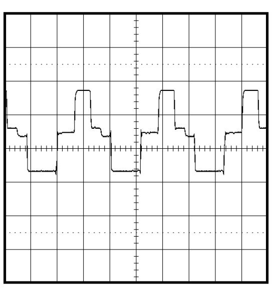
(18) 1V 1ms/div



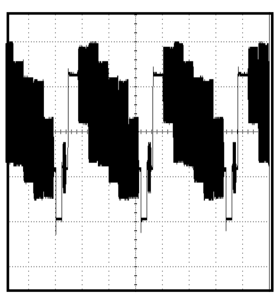
(15) 50V 20µs/div



(19) 200mV 500µs/div



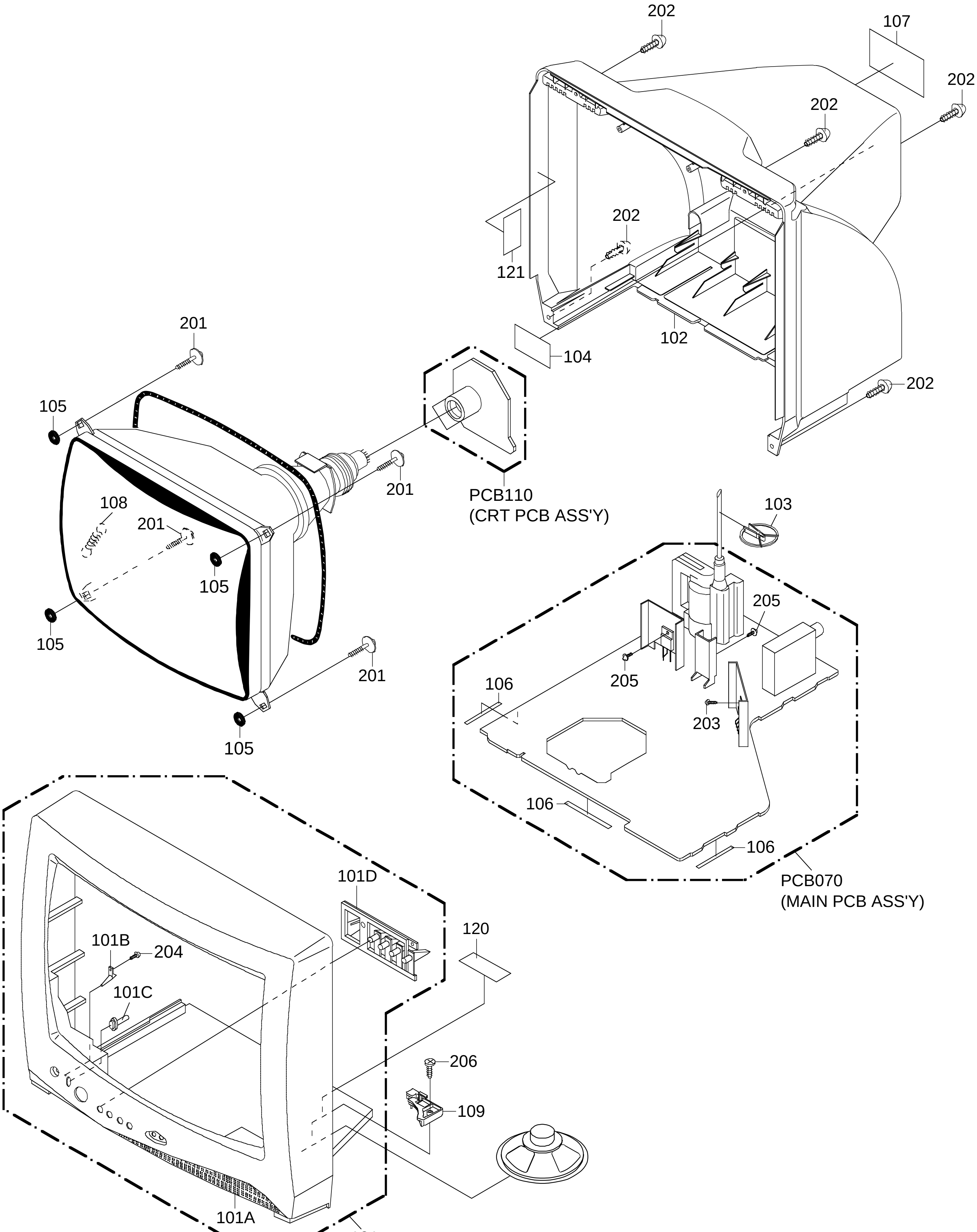
(16) 50V 20µs/div



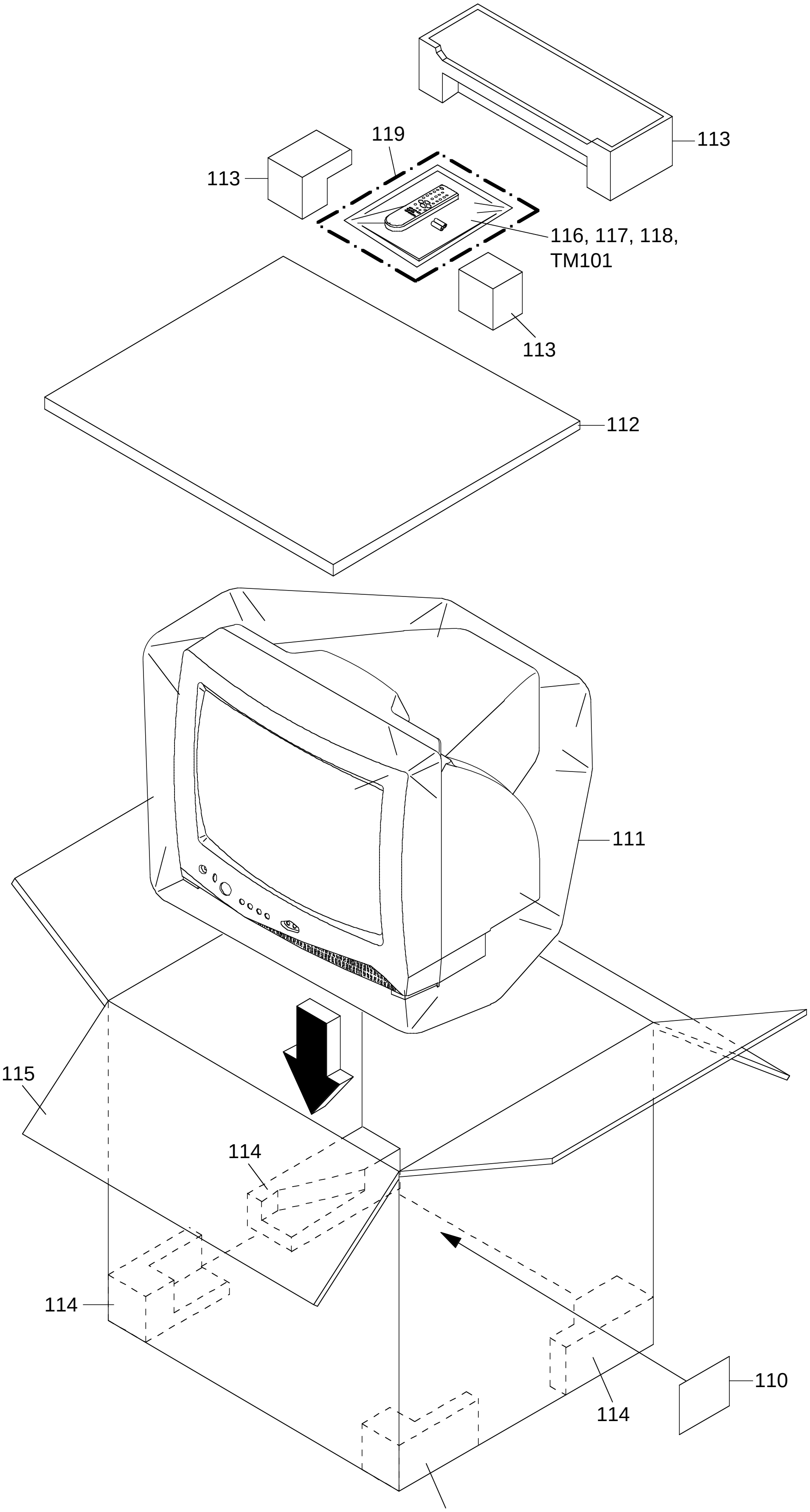
(20) 500mV 20µs/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	72781144	7A701A312A	FRONT CABI ASS'Y
101A	72799312	701WPJC918	CABINET FRONT
101B	72799477	713WPAA203	GLASS LED
101C	72799476	713WPAA202	GUIDE REMOCON
101D	72799757	735WPBB315	BUTTON FRAME
102	72783503	A3X001V740	CABINET,BACK ASSY
103	72794734	899HV3T000	HOLDER ANODE WIRE
104	72799717	726000A091	SHEET CRT SERVICEMAN
105	72796255	800WR0A011	SHEET CRT SUPPORT (D)
106	72798769	800WQ0A024	FELT SHEET
107	72783504	722549A565	SHEET RATING
108	72795687	741WUA0021	SPRING EARTH
109	72799738	735WPAA837	SPEAKER HOLDER
110	72783505	723000D248	SHEET BARCODE
111	72799981	791WHAA122	FILM BAG
112	72782852	791WHAA137	LIGHTRON SHEET
113	72798721	792WHAA052	PACKAGE TOP
114	72782855	792WHAA179	PACKAGE BOTTOM
115	72783506	793WCDD066	GIFT BOX
116	72783478	JB5ND200	POLYBAG INSTRUCTION(RED CAUTION)
117	72781569	J3N51617A	REGISTRATION CARD
118	72783476	J3X00121A	INSTRUCTION BOOK(E/S)
119	72783481	A3X001V975	INSTRUCTION BOOK KIT
201	72781281	8121J50B5U	SCREW TAP TITE(P) GW20 5*28 CH HEXAGON
202	72781279	8117540A6U	SCREW TAP TITE(B0) TRUSS 4*16 CH
203	72798786	810763080U	SCREW TAP TITE(S) BRAZIER 3*8 CH
204	72798790	811063080U	SCREW TAP TITE(P) BRAZIER 3*8 CH
205	72781255	8109I3080U	SCREW TAP TITE(B) WH7 3*8 CH
206	72798791	8110630A0U	SCREW TAP TITE(P) BRAZIER 3*10 CH

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	72781144	7A701A312A	FRONT CABI ASS'Y
101A	72799312	701WPJC918	CABINET FRONT
101B	72799477	713WPAA203	GLASS LED
101C	72799476	713WPAA202	GUIDE REMOCON
101D	72799757	735WPBB315	BUTTON FRAME
102	72783507	A3X002V740	CABINET,BACK ASSY
103	72794734	899HV3T000	HOLDER ANODE WIRE
104	72799717	726000A091	SHEET CRT SERVICEMAN
105	72796255	800WR0A011	SHEET CRT SUPPORT (D)
106	72798769	800WQ0A024	FELT SHEET
107	72783508	722549A572	SHEET RATING
108	72795687	741WUA0021	SPRING EARTH
109	72799738	735WPAA837	SPEAKER HOLDER
110	72783509	723000D260	SHEET BAR CODE
111	72799981	791WHAA122	FILM BAG
112	72782852	791WHAA137	LIGHTRON SHEET
113	72798721	792WHAA052	PACKAGE TOP
114	72782855	792WHAA179	PACKAGE BOTTOM
115	72783510	793WCDD078	GIFT BOX
116	72795599	JB5ND100	POLYBAG INSTRUCTION(RED CAUTION)
118	72783511	J3X00221A	INSTRUCTION BOOK(E/F)
119	72783512	A3X002V975	INSTRUCTION BOOK KIT
120	72795593	722000A023	SHEET HWC
121	72795594	722000A267	SHEET CSA WARNING
201	72781281	8121J50B5U	SCREW TAP TITE(P) GW20 5*28 CH HEXAGON
202	72781279	8117540A6U	SCREW TAP TITE(B0) TRUSS 4*16 CH
203	72798786	810763080U	SCREW TAP TITE(S) BRAZIER 3*8 CH
204	72798790	811063080U	SCREW TAP TITE(P) BRAZIER 3*8 CH
205	72781255	8109I3080U	SCREW TAP TITE(B) WH7 3*8 CH
206	72798791	8110630A0U	SCREW TAP TITE(P) BRAZIER 3*10 CH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			RESISTORS	
⚠R401	72794595	R4X5T6273F	R,METAL	27K OHM 1/6W
⚠R406	72781668	R3K181010J	R,METAL	1 OHM 1W
⚠R408	72796016	R4X5T6103F	R,METAL	10K OHM 1/6W
⚠R409	72781720	R4K1T4273F	R,METAL	27K OHM 1/4W
⚠R429	72781702	R3K58B4R7J	R,METAL OXIDE	4.7 OHM 3W
⚠R447	72781689	R3K58A151J	R,METAL OXIDE	150 OHM 2W
⚠R500	72794631	R0G3K2275K	RC	2.7M OHM 1/2W
⚠R501	72795522	R5X2CD3R3J	R,CEMENT	3.3 OHM 5W
⚠R514	72794633	R63881R22J	R,FUSE	0.22 OHM 1W
⚠R517	72781671	R3K581010J	R,METAL OXIDE	1 OHM 1W
⚠R518	72795514	R4X5T6562F	R,METAL	5.6K OHM 1/6W
⚠R525	72781692	R3K58A1R5J	R,METAL OXIDE	1.5 OHM 2W
⚠R538	72795500	R002T2155J	RC	1.5M OHM 1/2W
⚠R542	72781685	R3K581R68J	R,METAL OXIDE	0.68 OHM 1W
⚠R629	72781701	R3K58B220J	R,METAL OXIDE	22 OHM 3W
⚠R803	72781674	R3K581153J	R,METAL OXIDE	JS153R 15K OHM 1W
⚠R805	72781674	R3K581153J	R,METAL OXIDE	JS153R 15K OHM 1W
⚠R807	72781674	R3K581153J	R,METAL OXIDE	JS153R 15K OHM 1W
			CAPACITORS	
⚠C418	72795628	E02LT3471M	CE	470 UF 25V
⚠C434	72794396	E02LU8220M	CE	22 UF 100V
C437	72795104	P4J7F3474J	CMPP	0.47 UF 250V PMS
⚠C443	72783441	P4G8FJ912H	CMPP	0.0091UF 1.25KV PHE
⚠C447	72794416	E02LU5010M	CE	1 UF 50V
C448	72796351	E02LTD220M	CE	22 UF 250V
⚠C502	72795629	C0JTB0513K	CC	0.001 UF 500V B
⚠C503	72795629	C0JTB0513K	CC	0.001 UF 500V B
⚠C505	72795567	P2122B104M	CMP	0.1 UF 275V ECQUL
⚠C508	72795579	CD39E0MQ3M	CC	0.0047UF 250V
⚠C514	72795580	C0PLRR7W2K	CC	820 PF 2KV RR
⚠C515	72794425	E02LT2102M	CE	1000 UF 16V
⚠C517	72795580	C0PLRR7W2K	CC	820 PF 2KV RR
⚠C518	72796329	C0JTB05Q2K	CC	470 PF 500V B
⚠C519	72794425	E02LT2102M	CE	1000 UF 16V
⚠C521	72794411	E62NFC221M	CE	220 UF 200V
⚠C526	72797379	E02LFC221M	CE	220 UF 200V
C819	72795578	C0JBB0713K	CC	0.001 UF 2KV B
			DIODES	
D001	72794465	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D106	72795529	0021721150	LED	SLR-342VCT32
D403	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D404	72794490	D97U06R21B	DIODE,ZENER	MTZJ6.2B T-77
⚠D405	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
D406	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D408	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D409	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D410	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D411	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D412	72794469	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
⚠D501	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D502	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D503	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D504	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D505	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D506	72795541	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D508	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D509	72795541	D97U01801B	DIODE,ZENER	MTZJ18B T-77
⚠D510	72795545	D2WXRU2AM0	DIODE,SILICON	RU2AM-EIC
D511	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D512	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D513	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D514	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D515	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D516	72794483	D2WXN49370	DIODE,SILICON	1N4937
D517	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D518	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D521	72794487	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D522	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D528	72794489	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D602	72794481	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D603	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D604	72794486	D97U08R21B	DIODE,ZENER	MTZJ8.2B T-77
D606	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D611	72794487	D97U01201B	DIODE,ZENER	MTZJ12B T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			ICS	
IC101	72795532	I56F07091C	IC	OEC7091C
IC199	72783442	A3X001V075	INIT DATA	BR24L02F-WE2
⚠IC401	72783444	I0WTD9302B	IC	STV9302B
⚠IC501	72794512	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC1001	72795537	I01DP75110	IC	AN7511
			TRANSISTORS	
Q105	72795555	TPATB03003	COMPOUND TRANSISTOR	KRA102MAT
⚠Q401	72782813	TC1G058850	TRANSISTOR,SILICON	2SC5885
⚠Q402	72795480	TC5T01627Y	TRANSISTOR,SILICON	2SC1627_Y(TPE2)
⚠Q501	72795539	T25F035630	FET	2SK3563(ORION_Q)
⚠Q502	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q503	72794569	TA3T016240	TRANSISTOR,SILICON	2SA1624-AA
Q505	72795970	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q506	72794560	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
Q507	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q601	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q602	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q603	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q606	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q607	72794560	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
⚠Q801	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
⚠Q802	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
⚠Q803	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
			COILS &TRANSFORMERS	
L001	72796518	02167F3R3J	COIL	3.3 UH
⚠L501	72798941	0293000130	COIL,LINE FILTER	ELF15N010AP
⚠L503	72798932	028B140033	COIL,DEGAUSS	DYD1-3020-80
L801	72795941	021673101K	COIL	100 UH
T401	72796466	045011001L	TRANS,HORIZONTAL DRIVE	STP-03Q24
⚠T502	72796474	0481291084	TRANSFORMER,SWITCHING	81291084
			JACKS	
J702	72795495	060Q401112	RCA JACK	AV1-09AD-3
J703	72795494	060Q401111	RCA JACK	AV1-09AD-4
⚠J801	72783271	066F120020	SOCKET,CATHODE RAY TUBE	ISMP01S
⚠J1001	72796730	060J121014	JACK,RCA,3.5	MSJ-035-12A_PC
			SWITCHES	
SW101	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW102	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW103	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW104	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW105	72794688	0504101T34	SWITCH,TACT	EVQ21505R
			P.C.BOARD ASSEMBLIES	
PCB070	72783445	A3X001V070L	PCB ASS'Y	CMF081A
PCB110	72783447	A3X001V110L	PCB ASS'Y	CCF073A
			MISCELLANEOUS	
B501	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B504	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
BT001	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
⚠CD501	72795554	1209414909	CORD,AC BUSH	9414909
⚠CP401	72796822	069S450089	CONNECTOR PCB SIDE	A1561WV2-A5P
⚠CP502	72796821	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP503	72796825	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP601	72799047	069S260639	CONNECTOR PCB SIDE	A2001WR2-6P
CP801	72799048	069W010340	CONNECTOR PCB SIDE	131001101K1
CD101A	72783129	06CH012006	CORD,CONNECTOR	CH012006
CD101B	72783128	06CH012007	CORD,CONNECTOR	CH012007
CP802A	72796751	067U005049	WIRE HOLDER	B2013H02-5P
CP802B	72796751	067U005049	WIRE HOLDER	B2013H02-5P
CP803A	72796750	067U004029	WIRE HOLDER	B2013H02-4P
CP803B	72796750	067U004029	WIRE HOLDER	B2013H02-4P
EL001	72797070	124120301A	EYE LET	XRY20X30BD
EL002	72797069	124116281A	EYE LET	XRY16X28BD
⚠F501	72795538	081PC04005	FUSE	51MS040L
⚠FB401	72796666	043214050F	TRANSFORMER,FLYBACK	FNI14B002_M
FH501	72794496	06710T0009	HOLDER,FUSE	EYF-52BCY
FH502	72794496	06710T0009	HOLDER,FUSE	EYF-52BCY
OS101	72783448	077Q000025	REMOTE RECEIVER	KSM-713SY
⚠RY501	72796047	0560V20115	RELAY	ALKS321
S101	72798395	WBL6026038	FLAT CABLE AWM2468 A	WG26 4C BLACK 260MM
S102	72798400	WCL6834038	FLAT CABLE AWM2468 A	WG26 5C GRAY 340MM
⚠SP1001	72783449	070Z132025	SPEAKER	TC077S001-0217C
⚠TH501	72794693	D8EE0B1400	DEGAUSS ELEMENT	B59203-S1060-B14
TM101	72795473	076N0EH050	TRANSMITTER	RC-EH050(CT-859)
⚠TU001	72783421	0163300022	RF UNIT	115-V-KA35ARH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			MISCELLANEOUS	
⚠V801	72796972	098Q1404D1	CRT W/DY	A34AGT13X98(DL)
X601	72783450	100BT3R537	CRYSTAL	HC-49U

RESISTOR

RC................... CARBON RESISTOR

CAPACITORS

CC................... CERAMIC CAPACITOR
CE................... ALUMI ELECTROLYTIC CAPACITOR
CP................... POLYESTER CAPACITOR
CPP.................. POLYPROPYLENE CAPACITOR
CPL.................. PLASTIC CAPACITOR
CMP...................... METAL POLYESTER CAPACITOR
CMPL................ METAL PLASTIC CAPACITOR
CMPP................ METAL POLYPROPYLENE CAPACITOR

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			RESISTORS	
⚠R401	72794595	R4X5T6273F	R,METAL	27K OHM 1/6W
⚠R406	72781668	R3K181010J	R,METAL	1 OHM 1W
⚠R408	72796016	R4X5T6103F	R,METAL	10K OHM 1/6W
⚠R409	72781720	R4K1T4273F	R,METAL	27K OHM 1/4W
⚠R429	72781702	R3K58B4R7J	R,METAL OXIDE	4.7 OHM 3W
⚠R447	72781689	R3K58A151J	R,METAL OXIDE	150 OHM 2W
⚠R500	72794631	R0G3K2275K	RC	2.7M OHM 1/2W
⚠R501	72795522	R5X2CD3R3J	R,CEMENT	3.3 OHM 5W
⚠R514	72794633	R63881R22J	R,FUSE	0.22 OHM 1W
⚠R517	72781671	R3K581010J	R,METAL OXIDE	1 OHM 1W
⚠R518	72795514	R4X5T6562F	R,METAL	5.6K OHM 1/6W
⚠R525	72781692	R3K58A1R5J	R,METAL OXIDE	1.5 OHM 2W
⚠R538	72795500	R002T2155J	RC	1.5M OHM 1/2W
⚠R542	72781685	R3K581R68J	R,METAL OXIDE	0.68 OHM 1W
⚠R629	72781701	R3K58B220J	R,METAL OXIDE	22 OHM 3W
⚠R803	72781674	R3K581153J	R,METAL OXIDE	15K OHM 1W
⚠R805	72781674	R3K581153J	R,METAL OXIDE	15K OHM 1W
⚠R807	72781674	R3K581153J	R,METAL OXIDE	15K OHM 1W
			CAPACITORS	
⚠C418	72795628	E02LT3471M	CE	470 UF 25V
⚠C434	72794396	E02LU8220M	CE	22 UF 100V
C437	72795104	P4J7F3474J	CMPP	0.47 UF 250V PMS
⚠C443	72783441	P4G8FJ912H	CMPP	0.0091UF 1.25KV PHE
⚠C447	72794416	E02LU5010M	CE	1 UF 50V
C448	72796351	E02LTD220M	CE	22 UF 250V
⚠C502	72795629	C0JTB0513K	CC	0.001 UF 500V B
⚠C503	72795629	C0JTB0513K	CC	0.001 UF 500V B
⚠C505	72795567	P2122B104M	CMP	0.1 UF 275V ECQUL
⚠C508	72795579	CD39E0MQ3M	CC	0.0047UF 250V
⚠C514	72795580	C0PLRR7W2K	CC	820 PF 2KV RR
⚠C515	72794425	E02LT2102M	CE	1000 UF 16V
⚠C517	72795580	C0PLRR7W2K	CC	820 PF 2KV RR
⚠C518	72796329	C0JTB05Q2K	CC	470 PF 500V B
⚠C519	72794425	E02LT2102M	CE	1000 UF 16V
⚠C521	72794411	E62NFC221M	CE	220 UF 200V
⚠C526	72797379	E02LFC221M	CE	220 UF 200V
C819	72795578	C0JBB0713K	CC	0.001 UF 2KV B
			DIODES	
D001	72794465	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D106	72795529	0021721150	LED	SLR-342VCT32
D403	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D404	72794490	D97U06R21B	DIODE,ZENER	MTZJ6.2B T-77
⚠D405	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
D406	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D408	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D409	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D410	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D411	72794472	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D412	72794469	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
⚠D501	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D502	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D503	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D504	72795626	D2WXN40050	DIODE,SILICON	1N4005-EIC
⚠D505	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D506	72795541	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D508	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D509	72795541	D97U01801B	DIODE,ZENER	MTZJ18B T-77
⚠D510	72795545	D2WXRU2AM0	DIODE,SILICON	RU2AM-EIC
D511	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D512	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D513	72794480	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D514	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D515	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D516	72794483	D2WXN49370	DIODE,SILICON	1N4937
D517	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D518	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D521	72794487	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D522	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D528	72794489	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D602	72794481	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D603	72794491	D1VT001330	DIODE,SILICON	1SS133T-77
D604	72794486	D97U08R21B	DIODE,ZENER	MTZJ8.2B T-77
D606	72794488	D2WT011E10	DIODE,SILICON	11E1-EIC
D611	72794487	D97U01201B	DIODE,ZENER	MTZJ12B T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
			ICS	
IC101	72795532	I56F07091C	IC	OEC7091C
IC199	72783443	A3X002V075L	INIT DATA	BR24L02F-WE2
⚠IC401	72783444	I0WTD9302B	IC	STV9302B
⚠IC501	72794512	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC1001	72795537	I01DP75110	IC	AN7511
			TRANSISTORS	
Q105	72795555	TPATB03003	COMPOUND TRANSISTOR	KRA102MAT
⚠Q401	72782813	TC1G058850	TRANSISTOR,SILICON	2SC5885
⚠Q402	72795480	TC5T01627Y	TRANSISTOR,SILICON	2SC1627_Y(TPE2)
⚠Q501	72795539	T25F035630	FET	2SK3563(ORION_Q)
⚠Q502	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q503	72794569	TA3T016240	TRANSISTOR,SILICON	2SA1624-AA
Q505	72795970	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q506	72794560	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
Q507	72794577	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q601	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q602	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q603	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q606	72795476	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q607	72794560	T8YJ2412K0	TRANSISTOR,SILICON	2SC2412KT146 R,S
⚠Q801	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
⚠Q802	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
⚠Q803	72798340	TCKT1473A0	TRANSISTOR,SILICON	2SC1473A-TA-(RQ)
			COILS &TRANSFORMERS	
L001	72796518	02167F3R3J	COIL	3.3 UH
⚠L501	72798941	0293000130	COIL,LINE FILTER	ELF15N010AP
⚠L503	72798932	028B140033	COIL,DEGAUSS	DYD1-3020-80
L801	72795941	021673101K	COIL	100 UH
T401	72796466	045011001L	TRANS,HORIZONTAL DRIVE	STP-03Q24
⚠T502	72796474	0481291084	TRANSFORMER,SWITCHING	81291084
			JACKS	
J702	72795495	060Q401112	RCA JACK	AV1-09AD-3
J703	72795494	060Q401111	RCA JACK	AV1-09AD-4
⚠J801	72783271	066F120020	SOCKET,CATHODE RAY TUBE	ISMP01S
⚠J1001	72796730	060J121014	JACK,RCA,3.5	MSJ-035-12A_PC
			SWITCHES	
SW101	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW102	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW103	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW104	72794688	0504101T34	SWITCH,TACT	EVQ21505R
SW105	72794688	0504101T34	SWITCH,TACT	EVQ21505R
			P.C.BOARD ASSEMBLIES	
PCB070	72783446	A3X002V070L	PCB ASS'Y	CMF081A
PCB110	72783447	A3X001V110L	PCB ASS'Y	CCF073A
			MISCELLANEOUS	
B501	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B504	72794357	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
BT001	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	72799278	141R004016	BATTERY,MANGAN	GR03X-SP2
⚠CD501	72795554	1209414909	CORD,AC BUSH	9414909
⚠CP401	72796822	069S450089	CONNECTOR PCB SIDE	A1561WV2-A5P
⚠CP502	72796821	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP503	72796825	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP601	72799047	069S260639	CONNECTOR PCB SIDE	A2001WR2-6P
CP801	72799048	069W010340	CONNECTOR PCB SIDE	131001101K1
CD101A	72783129	06CH012006	CORD,CONNECTOR	CH012006
CD101B	72783128	06CH012007	CORD,CONNECTOR	CH012007
CP802A	72796751	067U005049	WIRE HOLDER	B2013H02-5P
CP802B	72796751	067U005049	WIRE HOLDER	B2013H02-5P
CP803A	72796750	067U004029	WIRE HOLDER	B2013H02-4P
CP803B	72796750	067U004029	WIRE HOLDER	B2013H02-4P
EL001	72797070	124120301A	EYE LET	XRY20X30BD
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⚠RY501	72796047	0560V20115	RELAY	ALKS321
S101	72798395	WBL6026038	FLAT CABLE AWM2468 AWG26 4C BLACK 260MM	
S102	72798400	WCL6834038	FLAT CABLE AWM2468 AWG26 5C GRAY 340MM	
⚠SP1001	72783449	070Z132025	SPEAKER	TC077S001-0217C
⚠TH501	72794693	D8EE0B1400	DEGAUSS ELEMENT	B59203-S1060-B14
TM101	72795473	076N0EH050	TRANSMITTER	RC-EH050(CT-859)
⚠TU001	72783421	0163300022	RF UNIT	115-V-KA35ARH

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		MISCELLANEOUS		
⚠V801	72796972	098Q1404D1	CRT W/DY	A34AGT13X98(DL)
X601	72783450	100BT3R537	CRYSTAL	HC-49U

RESISTOR

RC.................. CARBON RESISTOR

CAPACITORS

CC.................. CERAMIC CAPACITOR
CE.................. ALUMI ELECTROLYTIC CAPACITOR
CP.................. POLYESTER CAPACITOR
CPP................. POLYPROPYLENE CAPACITOR
CPL................. PLASTIC CAPACITOR
CMP................ METAL POLYESTER CAPACITOR
CMPL.............. METAL PLASTIC CAPACITOR
CMPP.............. METAL POLYPROPYLENE CAPACITOR

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN